CATTLEMEN'S DAY 2015

102nd ANNUAL

Kansas State University
Agricultural Experiment Station
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KANSAS STATE UNIVERSITY
CATTLEMEN'S DAY 2015

Animal Sciences & Industry
Weber Hall
Manhattan, Kansas

Cattle Industry Outlook

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March 6, 2015

Overarching Beef Industry Economic Outlook

- Supplies
  - Continue to be historically tight
- Demand
  - Confusing yet very positive in 2014
- Combined:
  - Record levels of $ at stake and mixed excitement

LMIC Beef Production and Price Quarterly Forecasts (2/24/15)

Sources: Livestock Slaughter - USDA/NASS; Steer Prices - USDA/AMS Livestock Market News; Projections and Forecasts by LMIC

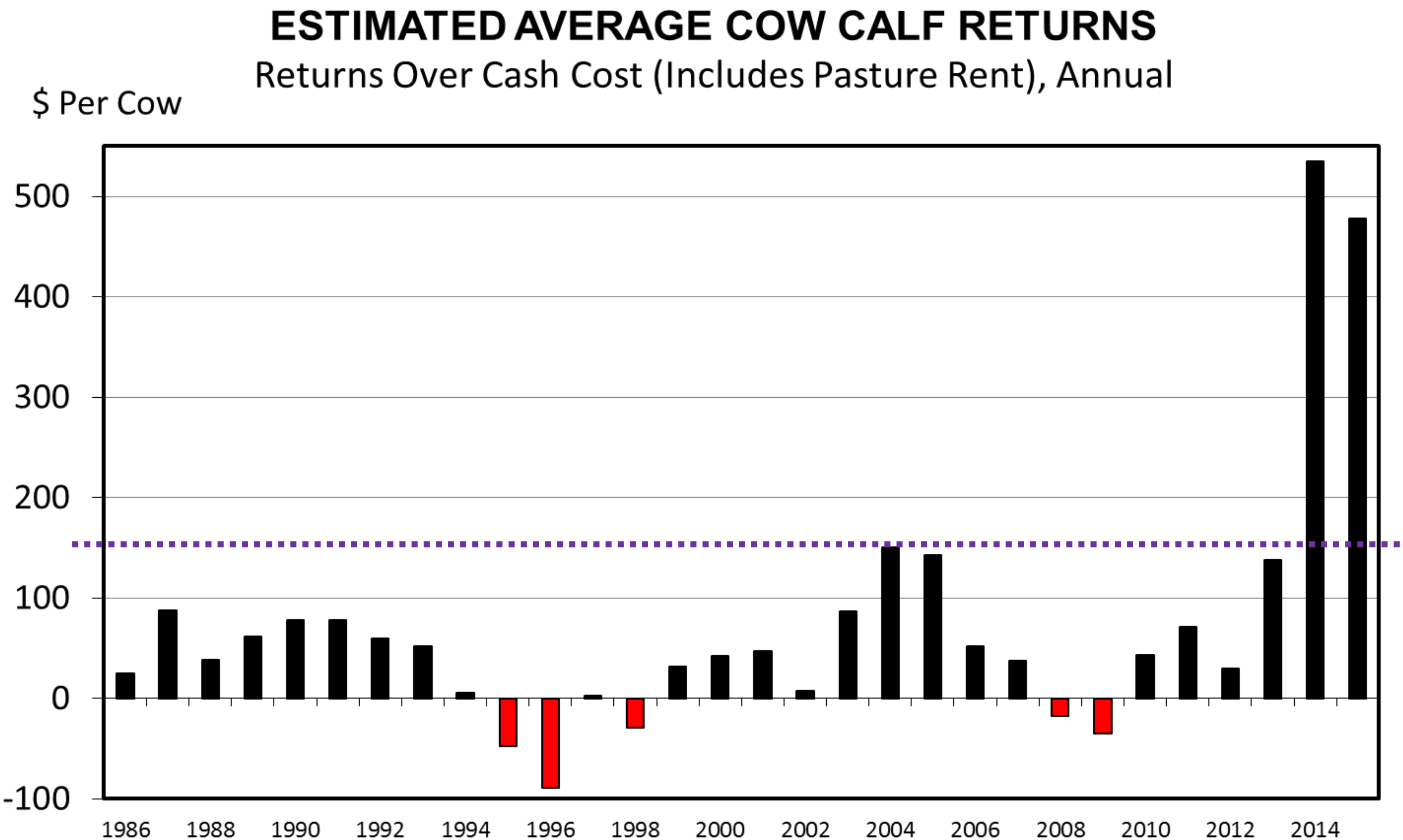
Year Quarter	Comm'l Slaughter	% Chg. from Year Ago	Average Dressed Weight	% Chg. from Year Ago	Comm'l Beef Production	% Chg. from Year Ago
2014						
I	7,375	-5.2	795.7	0.3	5,868	-5.0
II	7,836	-5.9	789.0	0.9	6,183	-5.1
III	7,630	-8.3	809.6	1.9	6,178	-6.5
IV	7,329	-8.8	821.7	2.8	6,023	-6.2
Year	30,171	-7.1	803.8	1.5	24,252	-5.7
2015						
I	7,095	-3.8	809.9	1.8	5,746	-2.1
II	7,620	-2.8	801.2	1.5	6,105	-1.3
III	7,520	-1.4	819.7	1.2	6,164	-0.2
IV	7,288	-0.6	822.7	0.1	5,996	-0.4
Year	29,523	-2.1	813.3	1.2	24,011	-1.0
2016						
I	7,144	0.7	814.4	0.6	5,818	1.3
II	7,369	-3.3	806.6	0.7	5,944	-2.6
III	7,679	2.1	827.1	0.9	6,351	3.0
IV	7,344	0.8	828.2	0.7	6,082	1.4
Year	29,536	0.0	819.2	0.7	24,195	0.8

LMIC Beef Production and Price Quarterly Forecasts (2/24/15)

Sources: Livestock Slaughter - USDA/NASS; Steer Prices - USDA/AMS Livestock Market News; Projections and Forecasts by LMIC

Year Quarter	Live Sltr. Steer Price 5-Mkt Avg	% Chg. from Year Ago	Feeder Steer Price Southern Plains 7-800#	5-600#
2014				
I	146.34	16.6	171.77	209.30
II	147.82	18.3	193.16	227.67
III	158.49	29.6	225.93	263.14
IV	165.59	26.6	239.81	285.63
Year	154.56	22.8	207.67	246.44
2015				
I	162-163	11.0	213-215	268-272
II	162-164	10.3	214-217	272-277
III	158-161	0.6	213-217	266-272
IV	159-163	-2.8	210-216	257-264
Year	160-163	4.5	212-217	265-272
2016				
I	159-164	-0.6	210-217	260-269
II	160-166	0.0	211-219	264-274
III	154-161	-1.3	207-216	260-269
IV	155-165	-0.6	204-215	251-263
Year	158-163	-0.6	209-216	259-269

Historically high 2014-2015 cow-calf return projections…



Data Source: USDA-AMS, Compiled and Analysis by LMIC

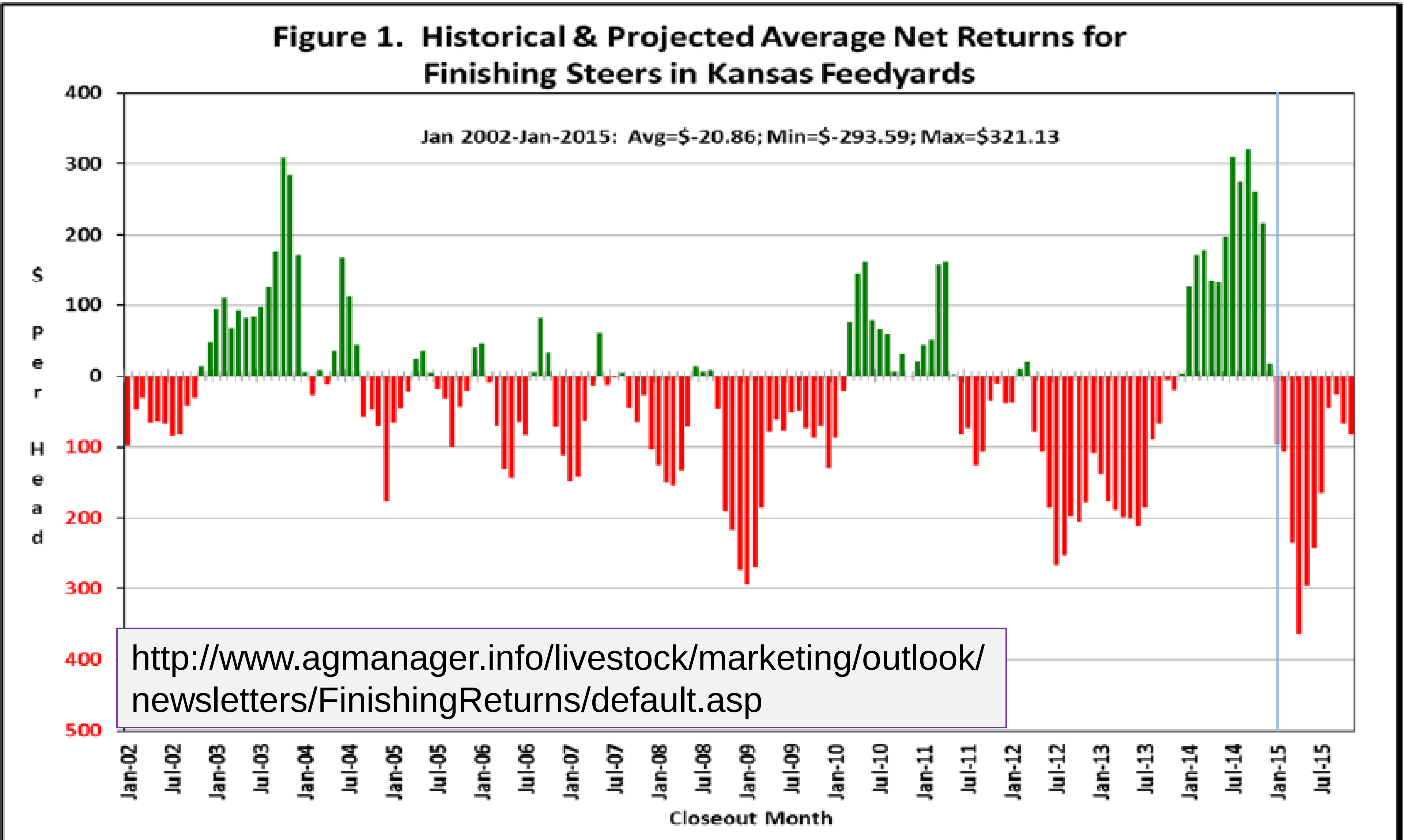
Livestock Marketing Information Center

C-P-66

Economic Outlook Overview: Stockers

- Salina, KS 3/6/15 situation (http://www.beefbasis.com/ForecastingTools/ValueofGain/tabid/1132/Default.aspx):
  - Buy 700 lb steer on 3/9/15 ($207.16)
  - Sell 750 lb steer on 4/6/15 ($201.39) {1.72 ADG}
    - VOG: $120.52/cwt
  - Buy 550 lb steer on 9/16/15 ($220.59)
  - Sell 750 lb steer on 12/24/15 ($194.04) {2.00 ADG}
    - VOG: $121.00/cwt

Economic Outlook Overview: Feedlots



Historical and Projected Kansas Feedlot Net Returns (as of 3/4/15')

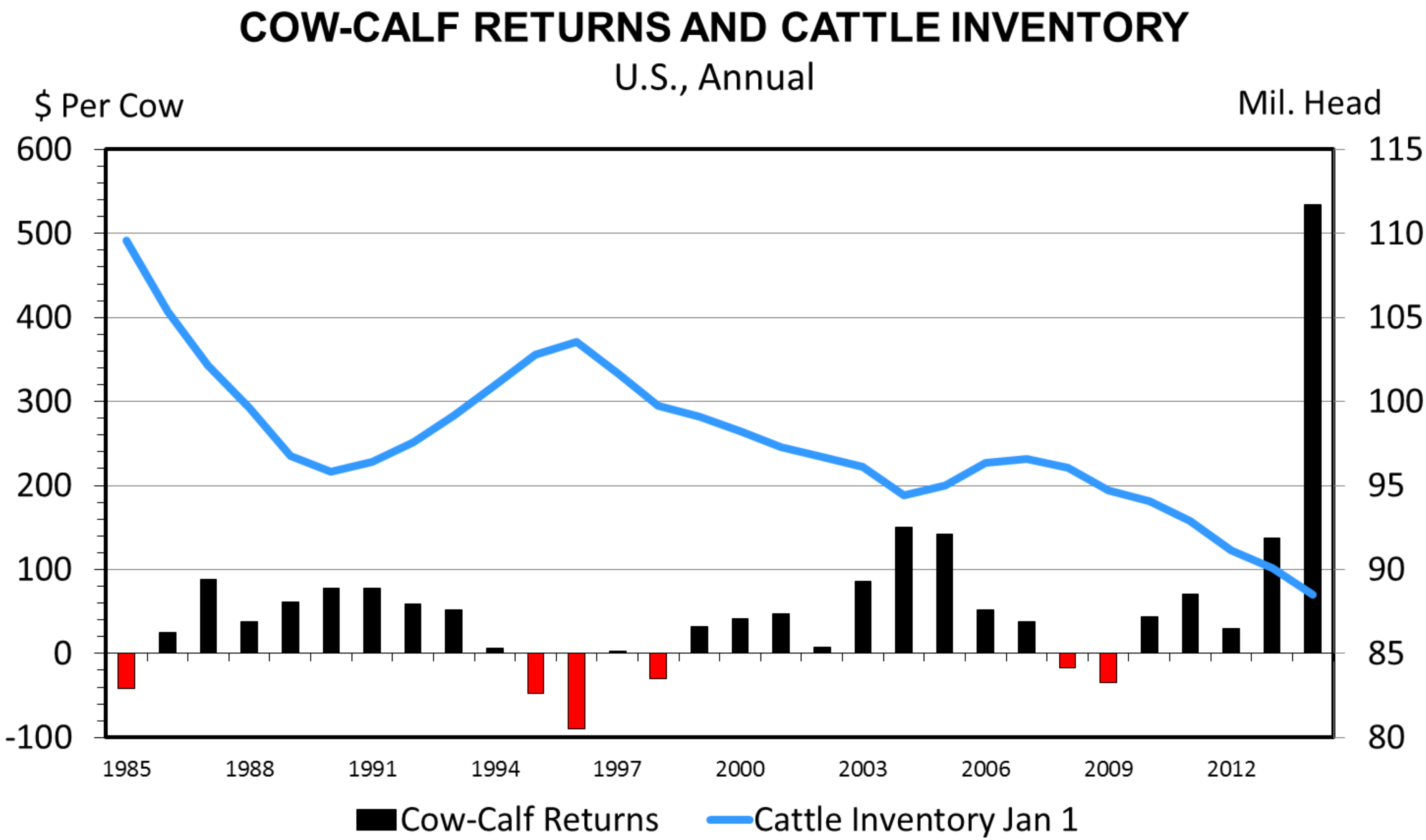
(http://www.agmanager.info/livestock/marketing/outlook/newsletters/FinishingReturns/default.asp)

Table 1. Projected Values for Finishing Steers in Kansas Feedyards*

Closeout Mo-Yr	Net Return	FCOG**	Fed Price	Feeder Price	Breakeven FCOG**	Breakeven Fed Price	Breakeven Feeder Price
Feb-15	-106.56	85.36	160.75	225.84	67.71	168.31	212.62
Mar-15	-235.07	85.96	153.73	229.62	46.35	170.75	199.78
Apr-15	-364.66	85.90	146.53	234.67	23.70	173.40	187.36
May-15	-295.92	84.20	149.51	238.32	35.89	171.42	198.24
Jun-15	-242.08	82.97	144.64	221.29	43.86	162.12	189.67
Jul-15	-165.19	82.83	142.71	207.88	56.35	154.53	186.54
Aug-15	-44.54	83.36	146.29	199.56	76.39	149.44	193.82
Sep-15	-25.16	84.90	146.13	196.54	81.00	147.91	193.26
Oct-15	-67.32	87.87	147.53	198.49	77.09	152.27	190.04
Nov-15	-82.30	88.45	147.03	199.98	75.24	152.88	189.49

Representative Barometer for Trends in Profitability

What do cow-calf producers do following "high" returns?



Data Source: USDA-AMS & USDA-NASS, Compiled and Analysis by LMIC

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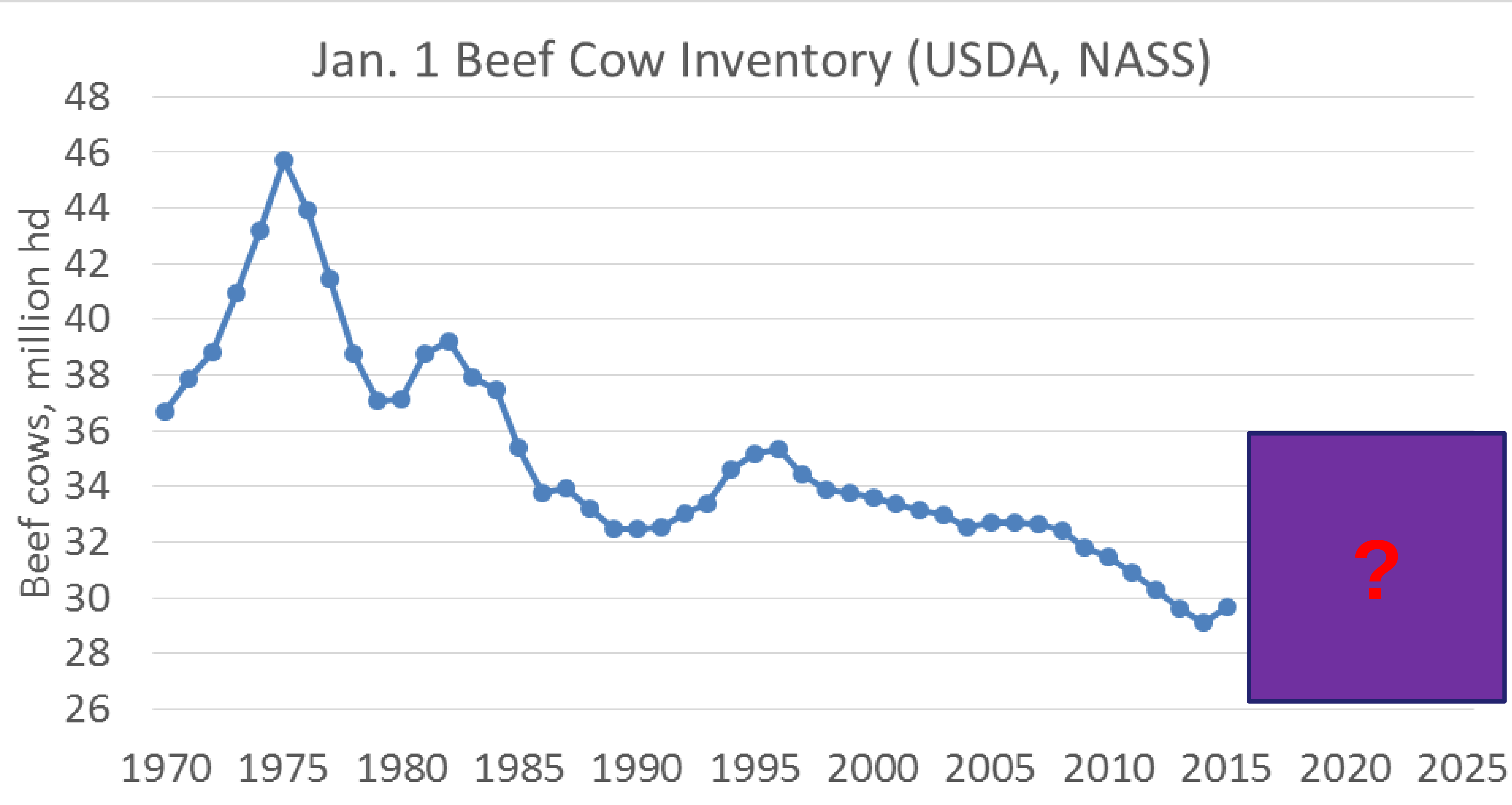
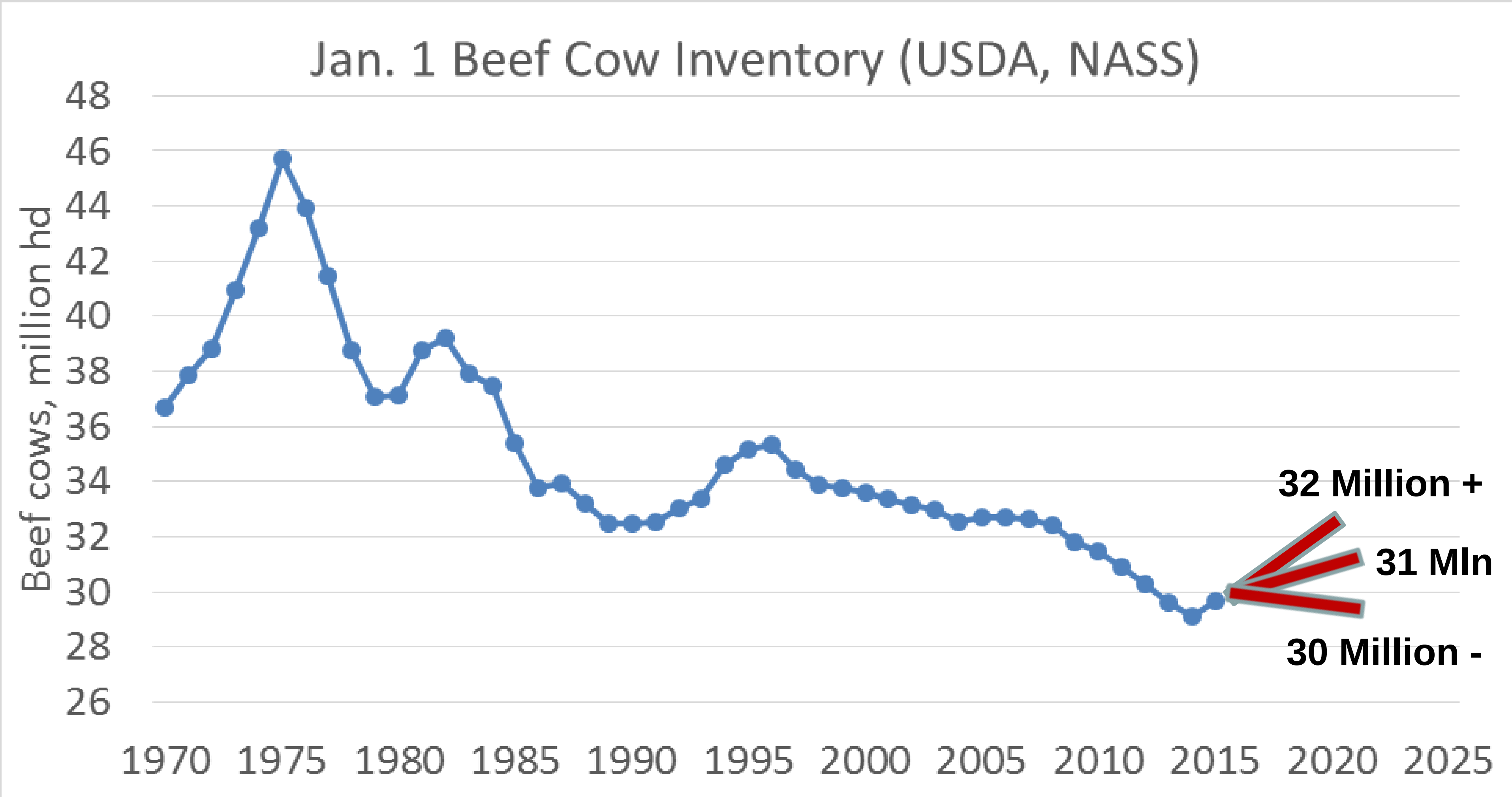
02/08/15

Where will cow numbers go from current levels?

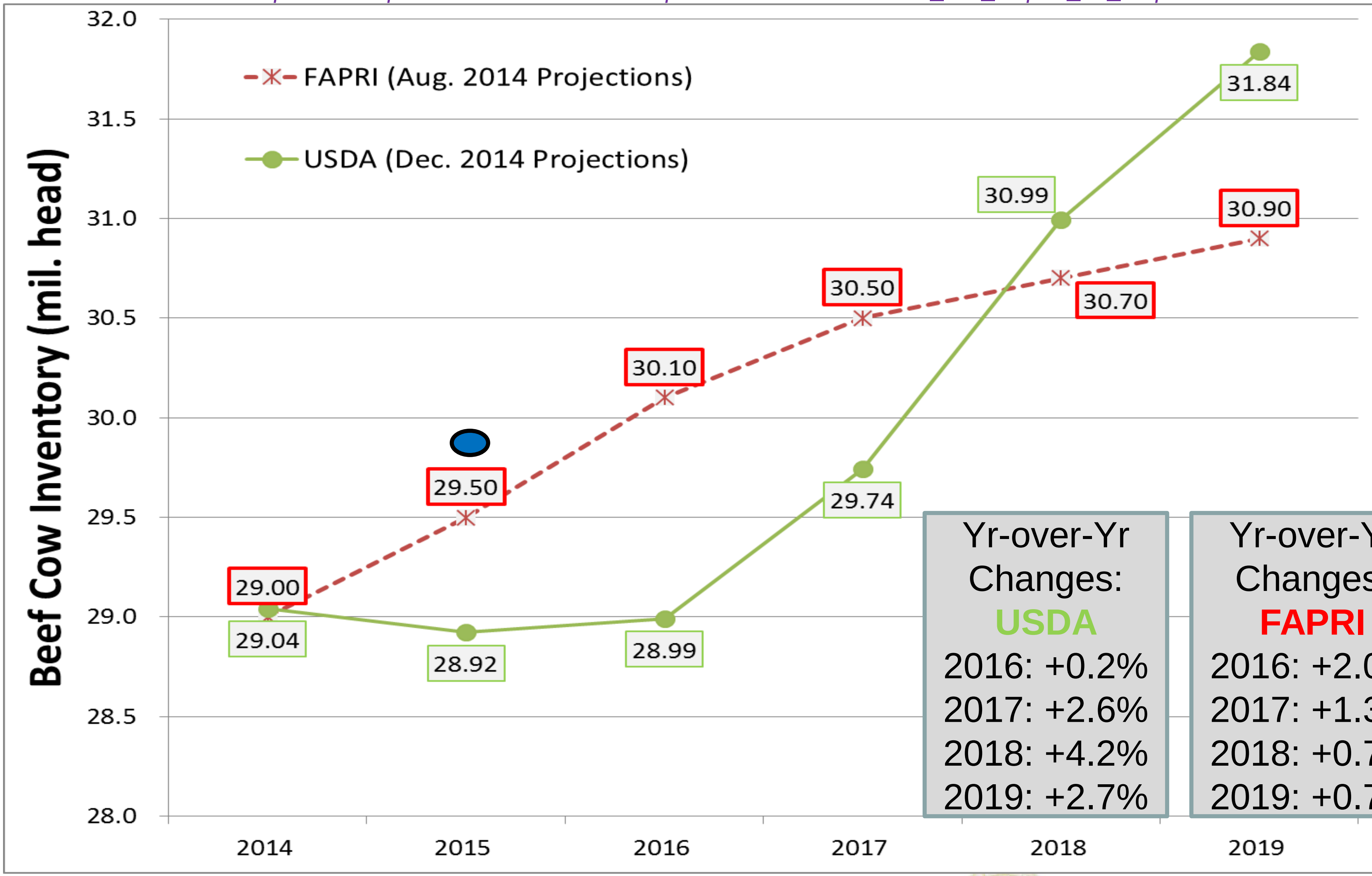


Where will cow numbers go from current levels?

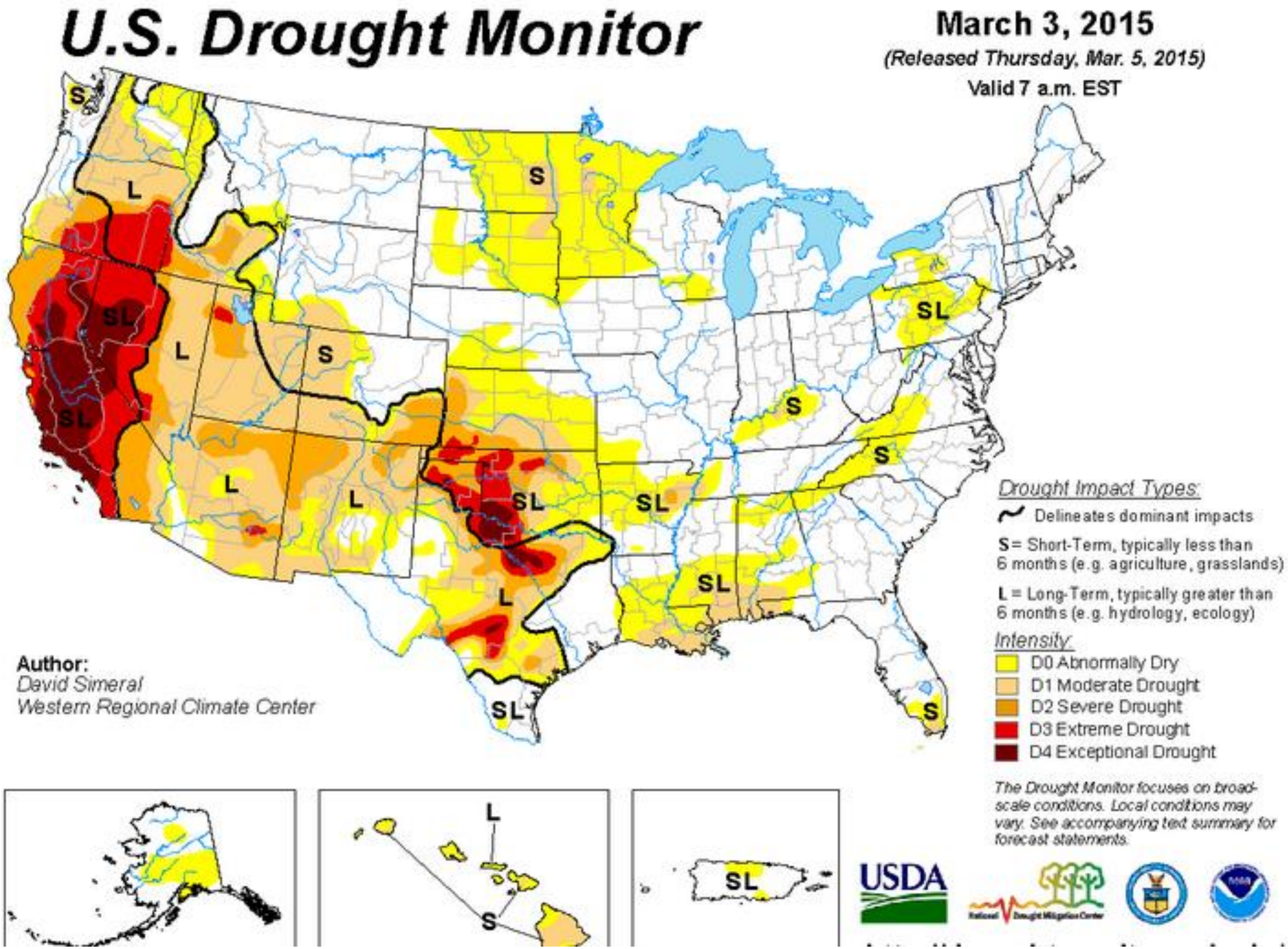


How Much Expansion? USDA & FAPRI Projections

http://www.ers.usda.gov/publications/oce-usda-agricultural-projections.aspx
http://www.fapri.missouri.edu/outreach/publications/2014/FAPRI_MU_Report_04_14.pdf



Yr-over-Yr Changes: USDA	Yr-over-Yr Changes: FAPRI
2016: +0.2%	2016: +2.0%
2017: +2.6%	2017: +1.3%
2018: +4.2%	2018: +0.7%
2019: +2.7%	2019: +0.7%


U.S. Drought Monitor
March 3, 2015
(Released Thursday, Mar. 5, 2015)
Valid 7 a.m. EST
Drought Impact Types:
Delineates dominant impacts
S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)
L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)
Intensity:
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.
Author:
David Simeral
Western Regional Climate Center
USDA
S
L
SL

Cow-Calf – Expansion Discussion

- *Why Did Herd Shrink?*
  - *Beef Demand Declines (long-term)*
  - *More Beef per Cow (long-term)*
  - *Drought & Feed Costs (more recent)*

- *What Can I pay for a Replacement?*
  - ***KSU-Beef Replacement*** spreadsheet (12/24/2014 update)
  - Two fact sheets and video tutorial also available online:
    - http://www.agmanager.info/livestock/budgets/production/default.asp

Cow-Calf – Expansion Discussion

- ***KSU-Beef Replacement*** spreadsheet
  - http://www.agmanager.info/livestock/budgets/production/default.asp

Net Present Value of Beef Replacements (Dec. 2014 version)

Year	Number of Calves	Base Case
2015	1	$1,725
2016	2	$1,936
2017	3	$2,074
2018	4	$2,203
2019	5	$2,274
2020	6	$2,322
2021	7	$2,359
2022	8	$2,384
2023	9	$2,407
2024	10	$2,428

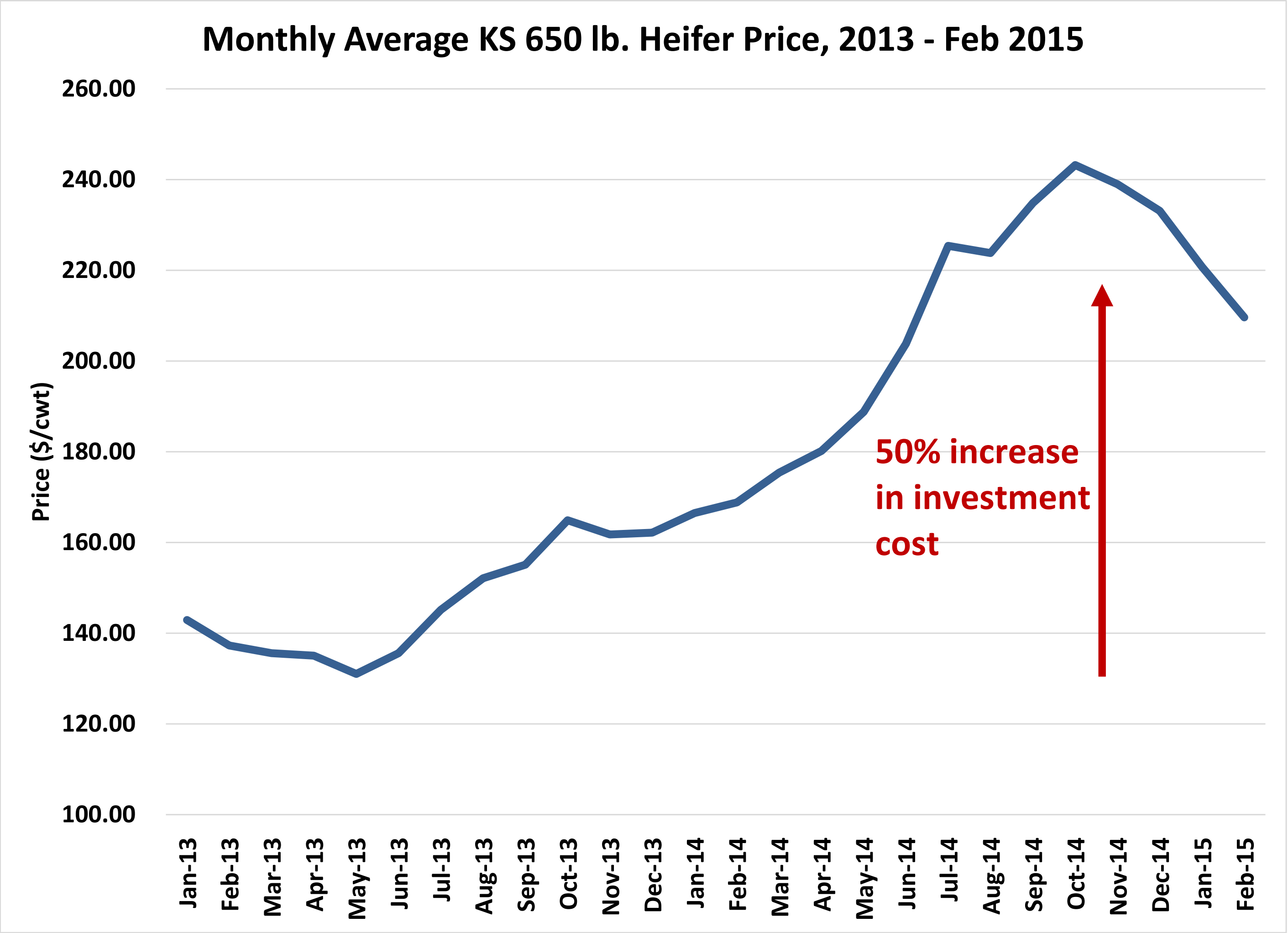
Key Inputs Varied Across Scenarios:

Annual cow costs, $/year		$700
Discount rate		7.50%
Calf Price, $/cwt	2015	$225
	2016	$213
	2017	$201
	2018	$198
	2019	$189
	2020	$183
	2021	$181
	2022	$178
	2023	$181
	2024	$186

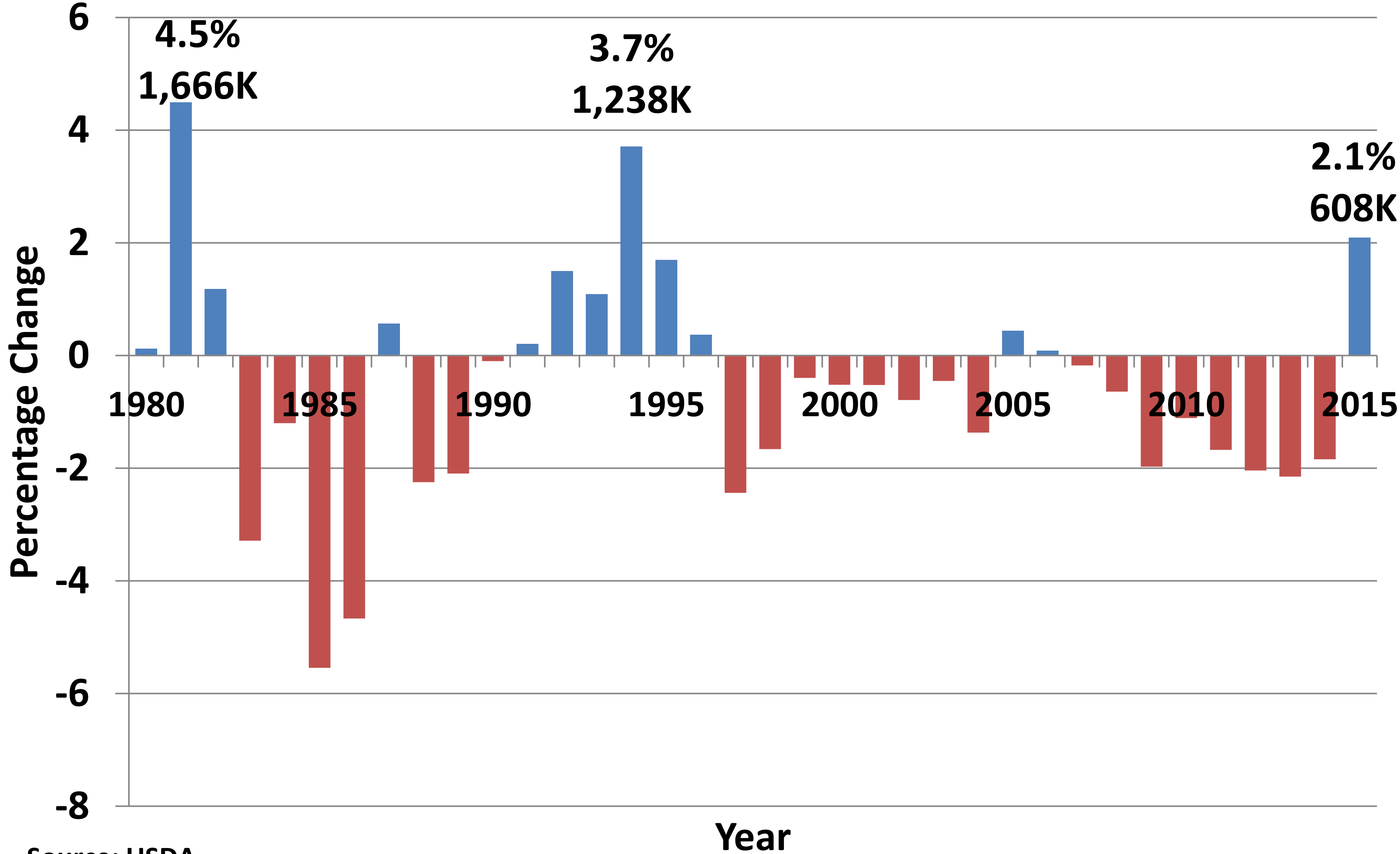
* NPV is Net Present Value of a replacement expected to produce the number of saleable calves listed in the "Number of Calves" column before a cow is culled for age-related reasons.

Added Investment Cost per Cow

Expanding is very expensive



US Beef Cow Inventory Year-over-Year Change, 1980- 2015

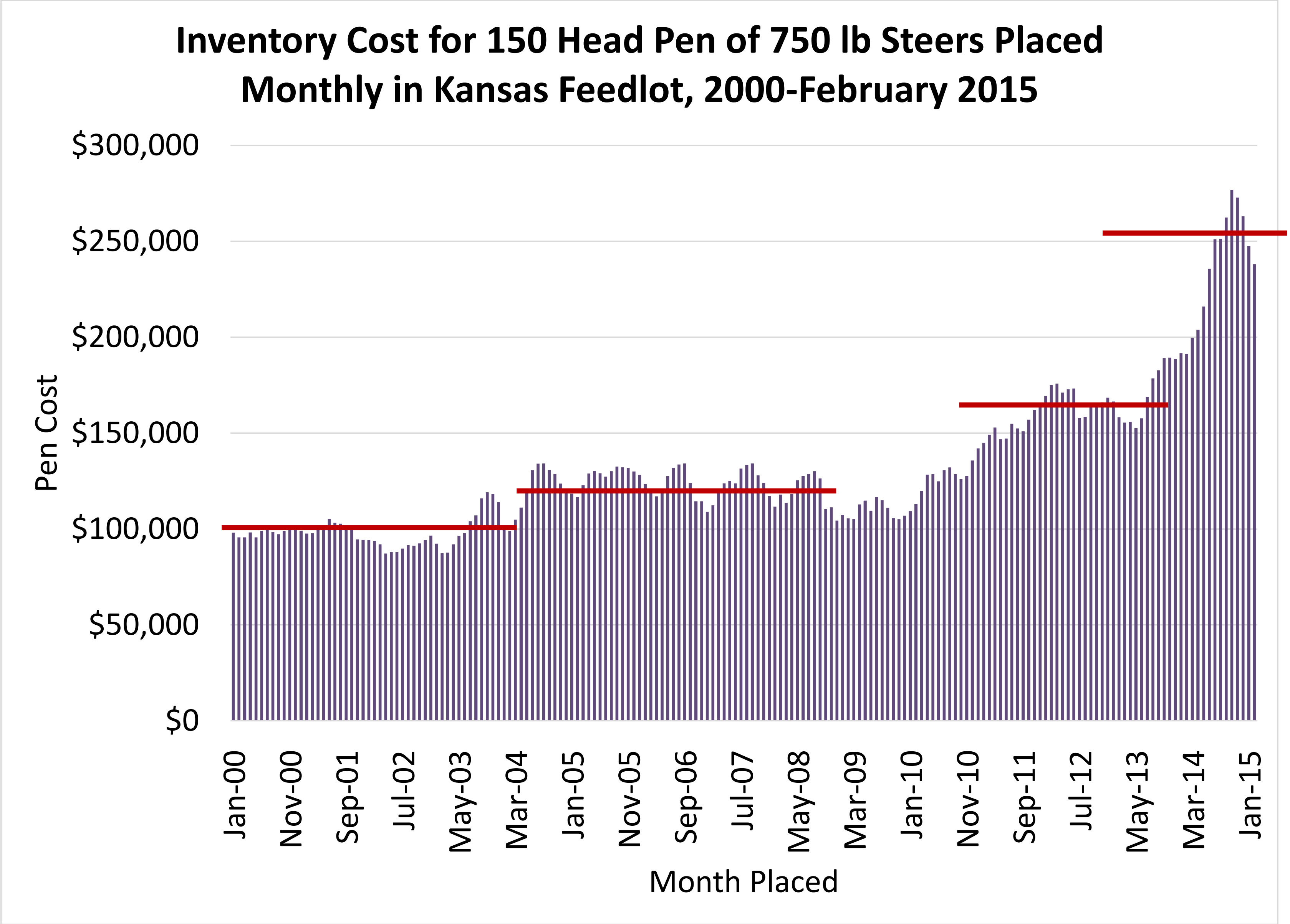


Source: USDA

Approximate Industry Investment in Added Heifers

Year	Added Head (1,000)	Nominal 650 Heifer Price ($/cwt)	Producer Price Index (2014=100)	Per Animal Cost (2014 Dollars)	Investment in Replacement Heifers (2014 Dollars)
1981	1,666	$64	53	$783	**$1,304,420,989**
1994	1,238	$82	54	$993	**$1,229,078,946**
2015	608	$230	100	**$1,495**	**$908,960,000**

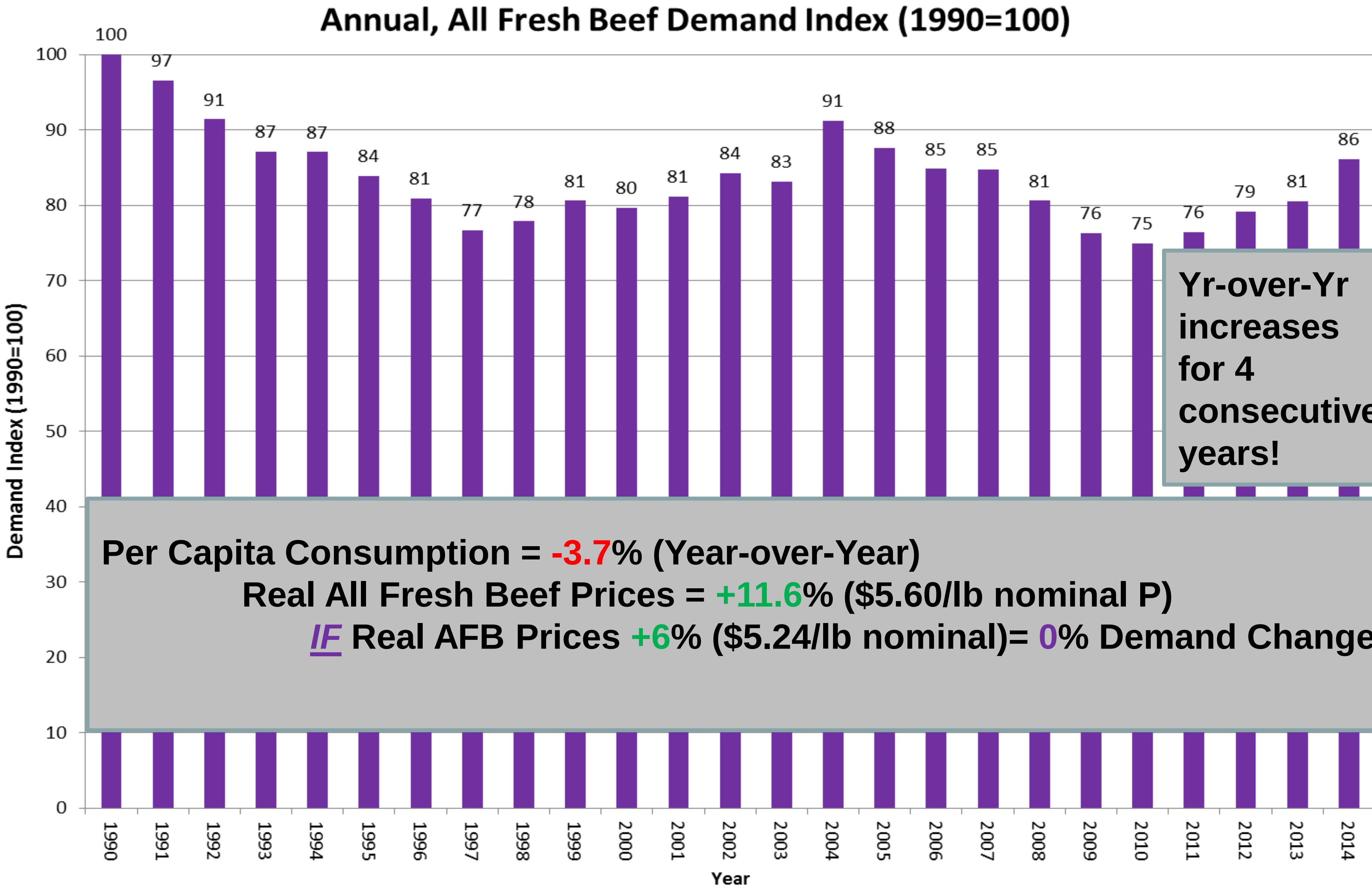
50% Greater Replacement Investment per Heifer


Inventory Cost for 150 Head Pen of 750 lb Steers Placed Monthly in Kansas Feedlot, 2000-February 2015
$300,000
$250,000
$200,000
$150,000
$100,000
$50,000
$0
Pen Cost
Jan-00
Nov-00
Sep-01
Jul-02
May-03
Mar-04
Jan-05
Nov-05
Sep-06
Jul-07
May-08
Mar-09
Jan-10
Nov-10
Sep-11
Jul-12
May-13
Mar-14
Jan-15
Month Placed

Capital Requirements Industry: High Stakes

- Signals to expand were apparent
- Likely not done yet
- Long term decisions
- Expanding is very expensive now
- Way more capital to play at all levels
- When capital needs increase:
  - Managing working capital critical
  - Emphasis on animal fertility and health
  - <u>Risk management becomes high priority</u>

- Hope for domestic and export beef demand strength



Yr-over-Yr increases for 4 consecutive years!

Per Capita Consumption = -3.7% (Year-over-Year)

Real All Fresh Beef Prices = +11.6% ($5.60/lb nominal P)

IF **Real AFB Prices +6% ($5.24/lb nominal)= 0% Demand Change**

Source: Glynn T. Tonsor, Kansas State University, Jan. 2015

http://www.agmanager.info/livestock/marketing/Beef%20Demand/default.asp

Wrap-Up

- Broad 2015 Profitability Outlook
  - Cow-calf: Very good (but not 2014)
  - Stocker: Okay, with lots of $ tied up
  - Feedlot: Struggle, with lots of $ tied up

Wrap-Up

- Keys to Profitable Herd Expansion
  - Ongoing domestic & global beef demand growth
  - Ongoing production efficiency gains
  - Persistent risk and capital management
  - Improved within industry coordination of effort

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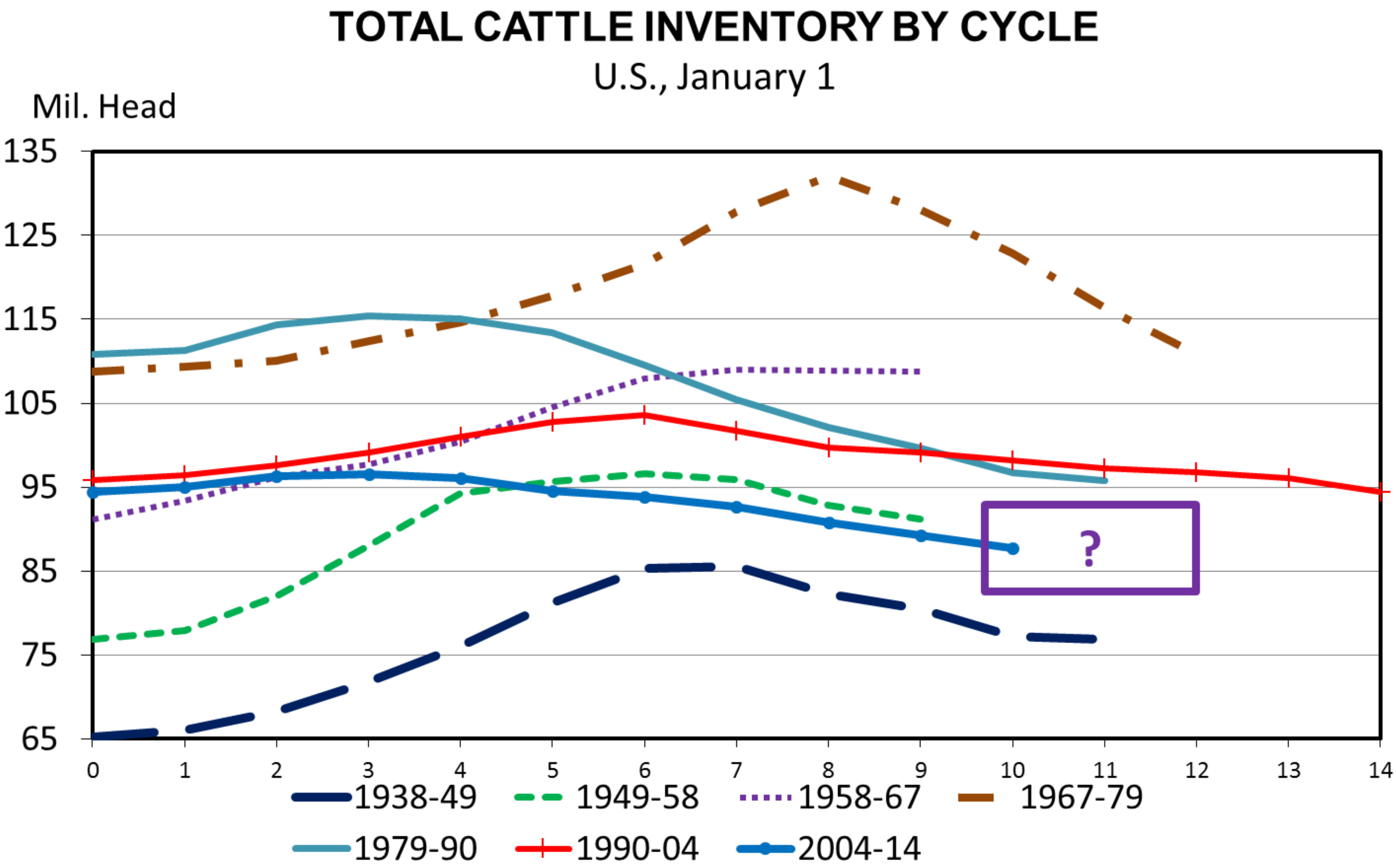
Pending Expansion? – How Fast?, How Large?, How Long?…



Data Source: USDA-NASS

Livestock Marketing Information Center

C-N-01
09/05/14

Table 1. Beef Cows that Calved (1,000 hd)

State / Region	1996	2006	2010	2015	1996 (% of US)	2006 (% of US)	2010 (% of US)	2015 (% of US)
TX	5,900	5,350	5,140	4,180	16.7%	16.4%	16.3%	14.1%
OK	1,986	2,045	2,073	1,900	5.6%	6.3%	6.6%	6.4%
MO	2,185	2,166	1,968	1,881	6.2%	6.6%	6.3%	6.3%
NE	1,930	1,930	1,781	1,786	5.5%	5.9%	5.7%	6.0%
SD	1,705	1,719	1,637	1,632	4.8%	5.3%	5.2%	5.5%
MT	1,570	1,401	1,465	1,506	4.4%	4.3%	4.7%	5.1%
KS	1,497	1,550	1,434	1,477	4.2%	4.7%	4.6%	5.0%
KY	1,200	1,118	1,070	1,007	3.4%	3.4%	3.4%	3.4%
IA	1,055	1,000	895	920	3.0%	3.1%	2.8%	3.1%
FL	1,115	916	958	916	3.2%	2.8%	3.0%	3.1%
US	35,319	32,703	31,440	29,693				
Great Plains	9,301	8,936	8,594	8,744	26.3%	27.3%	27.3%	29.4%
Southern Plains	7,886	7,395	7,213	6,080	22.3%	22.6%	22.9%	20.5%
Cornbelt	5,084	4,877	4,497	4,395	14.4%	14.9%	14.3%	14.8%
Northeast	372	332	343	354	1.1%	1.0%	1.1%	1.2%
Southeast	8,868	7,787	7,560	7,119	25.1%	23.8%	24.0%	24.0%
West	3,808	3,376	3,233	3,001	10.8%	10.3%	10.3%	10.1%

Table 2. Heifers for Beef Cow Replacement (1,000 hd)

State / Region	*1996*	*2006*	*2010*	*2015*	*1996 (% of US)*	*2006 (% of US)*	*2010 (% of US)*
TX	880	820	760	710	14.2%	14.0%	14.0%
MT	330	445	340	425	5.3%	7.6%	6.2%
OK	390	430	405	405	6.3%	7.3%	7.4%
NE	285	295	320	390	4.6%	5.0%	5.9%
SD	270	295	290	380	4.4%	5.0%	5.3%
MO	345	340	280	310	5.6%	5.8%	5.1%
KS	240	255	240	260	3.9%	4.3%	4.4%
WY	150	180	145	183	2.4%	3.1%	2.7%
IA	150	140	140	170	2.4%	2.4%	2.6%
ND	175	157	165	164	2.8%	2.7%	3.0%
US	6,189	5,864	5,443	5,777			
Great Plains	1,610	1,742	1,620	1,962	26.0%	29.7%	29.8%
Southern Plains	1,270	1,250	1,165	1,115	20.5%	21.3%	21.4%
Cornbelt	847	856	762	822	13.7%	14.6%	14.0%
Northeast	107	94	99	114	1.7%	1.6%	1.8%
Southeast	1,598	1,288	1,213	1,133	25.8%	22.0%	22.3%
West	757	633	584	632	12.2%	10.8%	10.7%

USDA Long-Term projections (2015-2024)

Early release on Dec. 18, 2014

Feb. 11, 2015 report (http://www.usda.gov/oce/commodity/projections/index.htm)

Per capita meat consumption, retail weight

	Recent		NEXT 5 YEARS					10 Yrs Out
Item	2013	2014	2015	2016	2017	2018	2019	2024
						Pounds		
Beef	56.3	54.6	52.2	49.4	48.5	49.1	49.8	52.4
Pork	46.8	45.3	46.6	48.5	48.8	49.1	49.3	49.5
Total red meat	104.4	101.1	99.9	99.0	98.4	99.3	100.1	102.9
Broilers	81.9	83.4	85.4	86.7	88.1	89.2	90.2	93.1
Turkeys	16.0	15.7	15.8	16.2	16.5	16.7	16.8	17.3
Total poultry	99.2	100.3	102.5	104.2	106.0	107.3	108.4	111.9
Red meat & poultry	203.6	201.4	202.3	203.2	204.4	206.5	208.5	214.8

2024 (215 lbs) < 2008 (216 lbs)

USDA Long-Term projections (2015-2024)

Early release on Dec. 18, 2014

Feb. 11, 2015 report (http://www.usda.gov/oce/commodity/projections/index.htm)

		Recent		NEXT 5 YEARS					10 Yrs Out
Beef long-term projections									
Item	Units	2013	2014	2015	2016	2017	2018	2019	2024
Commercial production	Mil. lbs.	25,720	24,459	23,665	22,667	22,536	22,986	23,550	25,947
Change from previous year	Percent	-0.7	-4.9	-3.2	-4.2	-0.6	2.0	2.5	0.8
Total production	Mil. lbs.	25,791	24,530	23,736	22,738	22,607	23,057	23,621	26,018
Imports	Mil. lbs.	2,250	2,823	2,700	2,600	2,600	2,725	2,775	3,025
Total supply	Mil. lbs.	28,649	27,937	26,931	25,823	25,697	26,282	26,896	29,543
Exports	Mil. lbs.	2,590	2,599	2,525	2,543	2,662	2,800	2,935	3,475
Total consumption	Mil. lbs.	25,475	24,843	23,921	22,790	22,535	22,982	23,461	25,568
Per capita, retail weight	Pounds	56.3	54.6	52.2	49.4	48.5	49.1	49.8	52.4
Change from previous year	Percent	-1.8	-3.2	-4.4	-5.4	-1.8	1.3	1.4	0.0

USDA Long-Term projections (2015-2024)

Early release on Dec. 18, 2014

Feb. 11, 2015 report (http://www.usda.gov/oce/commodity/projections/index.htm)

		Recent		NEXT 5 YEARS					10 Yrs Out
Beef long-term projections									
Item	Units	2013	2014	2015	2016	2017	2018	2019	2024
Prices:									
Beef cattle, farm	$/cwt	124.67	152.52	157.54	161.69	163.00	161.85	156.47	156.17
Calves, farm	$/cwt	174.25	247.86	278.24	263.78	249.96	247.21	237.11	231.42
Steers, 5-area	$/cwt	125.89	154.41	159.50	163.70	165.03	163.86	158.42	158.11
Feeder steers, Oklahoma City	$/cwt	147.06	202.51	226.75	214.96	203.70	201.46	193.23	188.59
Feed price ratio:									
Beef cattle-corn	Ratio	18.1	34.2	45.0	47.6	46.6	46.2	44.7	42.2
Beef cow inventory	1,000 head	29,631	29,042	28,922	28,991	29,741	30,992	31,837	33,697

USDA Long-Term projections (2015-2024)

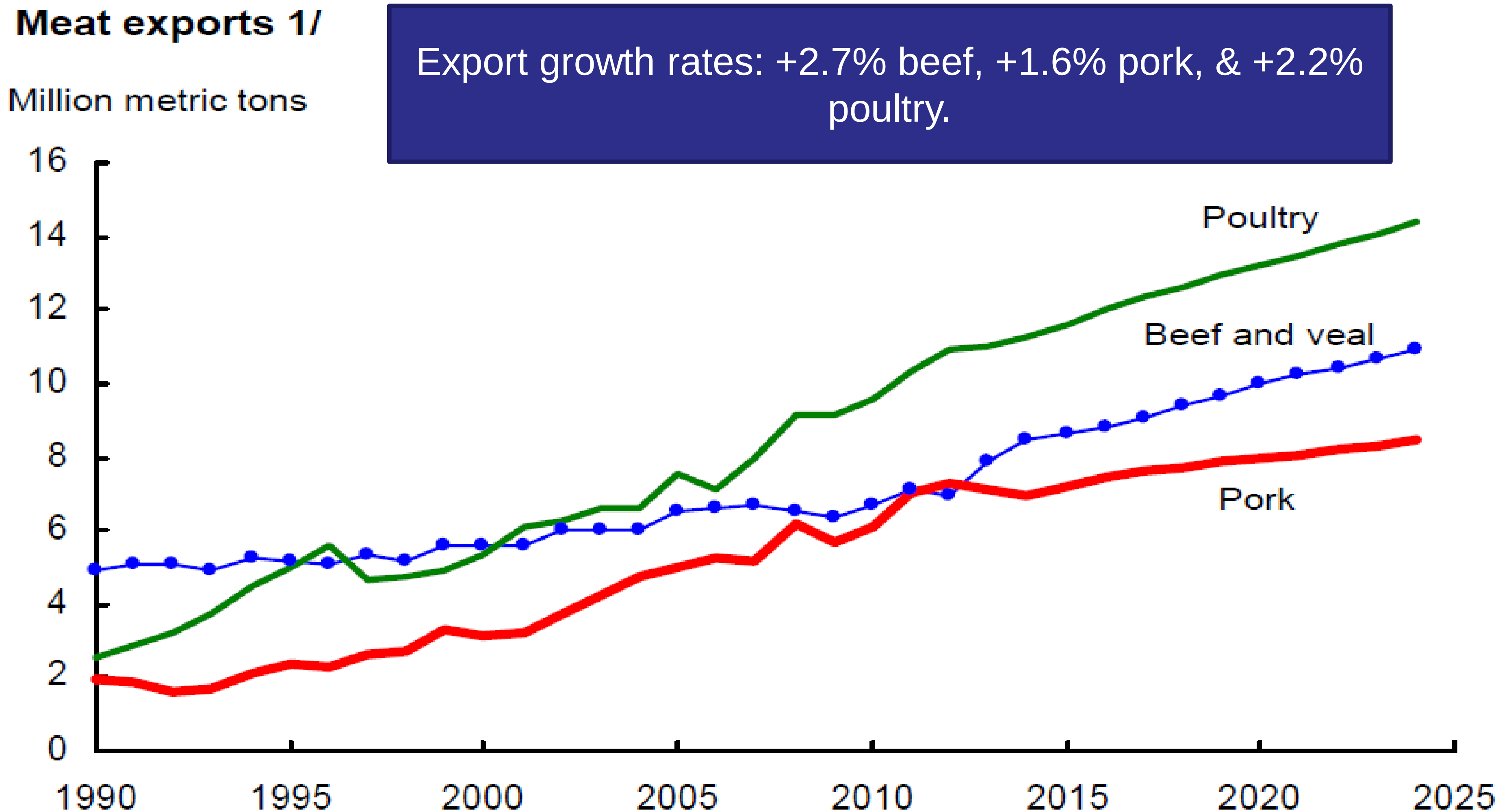
Feb. 11, 2015 report (http://www.usda.gov/oce/commodity/projections/index.htm)

- Keys changes of major beef exporters
  - **SEE table 14**
  - India becomes largest beef export in 2017
    - +62% over 2015-2024 period
  - Brazil: 2nd largest exporter
  - Australia: 3rd largest exporter
    - Herd is down & in rebuilding phase
  - US Exports +38% over 2015-2024 period

USDA Long-Term projections (2015-2024)

Feb. 11, 2015 report (http://www.usda.gov/oce/commodity/projections/index.htm)

Export growth rates: +2.7% beef, +1.6% pork, & +2.2% poultry.



1/ Major exporters (see tables 14-16).

USDA Long-Term projections (2015-2024)

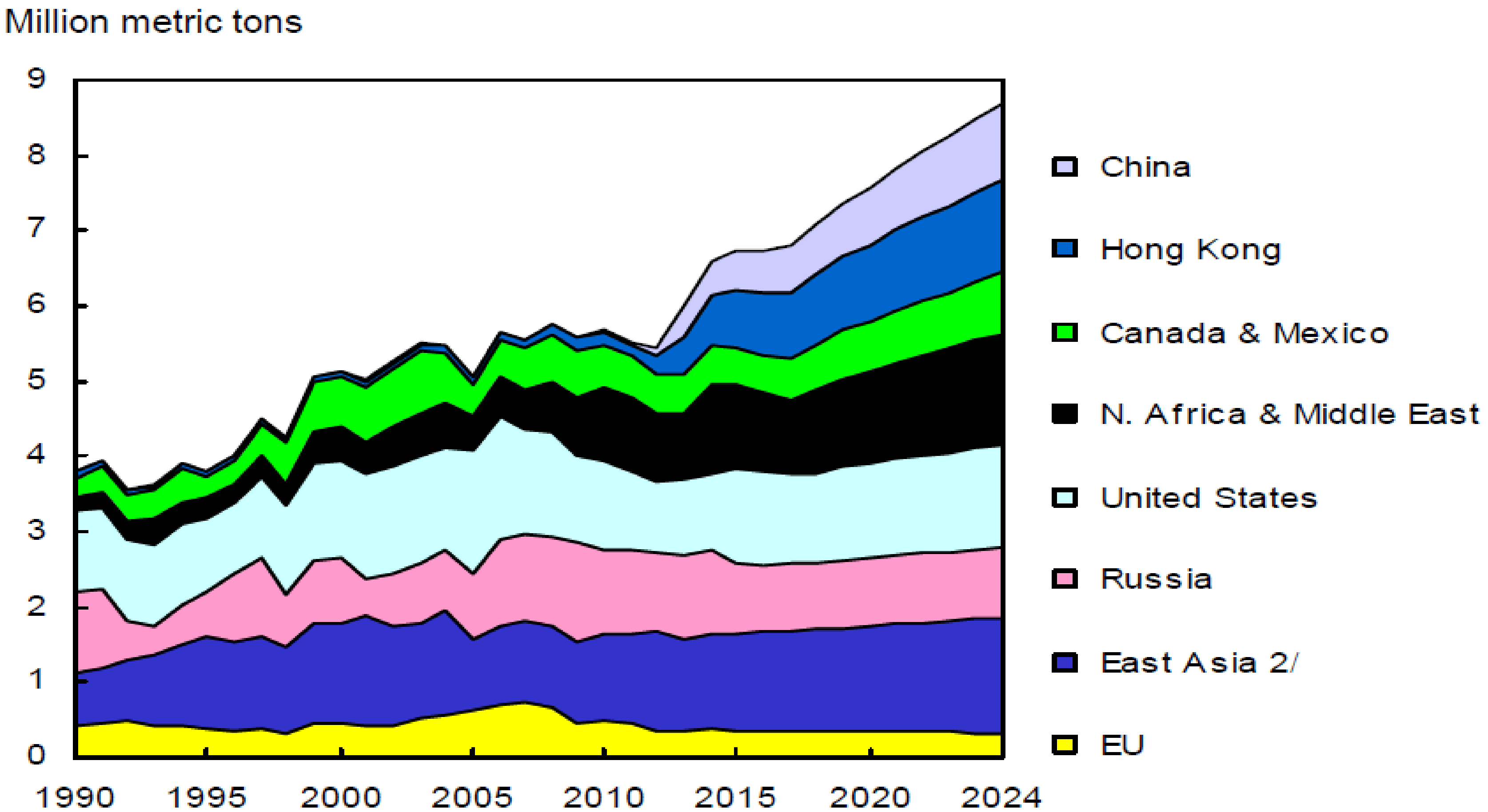
Feb. 11, 2015 report (http://www.usda.gov/oce/commodity/projections/index.htm)

- Keys changes of major beef importers
  - **SEE table 14**
  - India & Brazil beef to low- & mid- income countries
    - Account for 75% of projected export vol. increase
  - China & Hong Kong
    - +71% volume over 2015-2024

USDA Long-Term projections (2015-2024)

Feb. 11, 2015 report (http://www.usda.gov/oce/commodity/projections/index.htm)

Beef imports 1/



1/ Selected importers. 2/ Japan, Korea, & Taiwan.